Primrose, Alexander

Sept. 1915 - May 1916

No 4 CANADIAN GENERAL HOSPITAL
(UNIVERSITY OF TORONTO)

Shorncliffe
Sep. 23: 1915

My dear Mr. President,

The new approach of the 1st of October makes one curious to know how matters are arranged for the beginning of another session at the university – I am sure there will be many difficulties in consequence of so large a number of the staff being absent – We heard a rumour that MacKenzie & Brodie had been sent for but I have as yet had no confirmation of this – I have not seen either of them for about a month but at that time they were busily engaged with their experimental work in London

of our officers, nurses and men the hospital has been made most efficient and, in spite of old buildings, bad plumbing, and shortage in equipment generally, the results are excellent and compare favourably with those obtained for example in the Toronto General Hospital. The nurses have done magnificent work and it is gratifying to learn that our services have been much appreciated by the patients & officials. Quite a large amount of surgery has been done, three over 170 operations were performed in a month – This has been the chief hospital for surgery in the Shorncliffe district and as we had (until last week) nearly 60.000 men in camp you will readily understand a large amount of surgery would be required in a population of that size apart altogether from war conditions – In addition hundreds men who have been wounded & returned from the front have been sent to our hospital for treatment – In the most few days we are

since the 2nd division moved out our Shorncliffe population is diminished but fresh troops are coming in again

and they said they were getting some valuable data in their investigations -

We have had a long weary wait in England - There is no immediate prospect of moving but we are prepared to depart at short notice in whatever direction our services may be required. It is generally supposed our destination will be France. Here are some facts about our position here however which should be appreciated at home - First the nature of the conditions in France is such that obviously a large number of skilled men must be held in readiness for a great emergency and a large number of empty beds must be kept vacant in the hospitals in France - As a matter of fact the hospitals in France have been idle for the greater part of the time during the last few months and far more active hospital work has been done in England than in France - Thus, for example, our hospital here with 250 beds has done in principle more work than McGill with a hospital at least 3 times that size in France. Had a great engagement taken place in France the situation would have been reversed - as it is however the members of the hospital staffs in France have been very idle and it could not have been otherwise. It is very hard on the individual men who are keen for work but it can't be helped and of course in the interest of our troops we would not wish it otherwise -

I should like to give you some clear idea of what the University unit is doing here - The "Shoreclifffe military Hospital" which we have under our care is an institution of 250 beds - We took charge of this hospital about the 1st July - It had formerly been under the R. A. M. C. and the work was not well done - Thanks to the efficient work

the university will act along these lines as they are naturally worried at present over the situation. The men who are with us are all doing good work and they are doing their share in maintaining the efficiency of the unit.

I sent a number of additional photographs to the Dean a fortnight ago. They were chiefly taken about the hospital, no doubt you will see them. I have heard of you from time to time during the summer. My wife speaks of the pleasure she has had in seeing you occasionally. I am so glad my wife & daughters had enjoyment as a result the summer & I am sure they enjoyed it.

The war news is more reassuring of late. The general feeling seems to be that there will be little or no activity in Flanders until the ground is frozen.

With very kind regards to you & yours

Forever, believe me,

Very sincerely yours

A. P. Morse

No 4 CANADIAN GENERAL HOSPITAL

(UNIVERSITY OF TORONTO)

to take over new huts in connection with the hospital which will add some 300 additional beds and thus double our accommodation.

I can say all these things about the efficient work of the hospital the more freely because I have had no hand in it myself. The surgery has been undertaken entirely by the younger men and McKeown and I have been engaged in quite a different line of activity. We have each been president of a medical board. Each board consists of 3 members and we sit daily and examine men convalescent from wounds & disease (chiefly the former) and pronounce upon the individual case as to whether he is fit for any kind of further service or is permanently unfit. I must say this work gets very monotonous at times but we have the satisfaction of knowing it is very necessary and,

as far as the interest is concerned, we often see some extremely remarkable cases among those wounded or the victims of gas poisoning etc. This work has at all events the merit of giving us daily employment without which we would be very miserable in this waiting game. Some idea of the amount of work done by us may be imagined when I tell you that in 3 months our 2 wards have had some two thousand five hundred cases pass through our hands. We are required to make out special papers with our recommendations in each case.

A number of our staff are at work elsewhere. Thus Course McKenzie & Brodie are in Lond. Gen. Hosp. in France. Major Angus is at the front as sanitary officer with the second Division. A large number of our nurses are at different hospitals in France. Some of these will be required when we take over the new unit and the increased number of patients will provide work for a large staff of officers.

There is a matter of which I would like to speak concerning some of our men who have completed their fourth year. Personally I am of opinion they should be granted their degree next spring and this view is shared unanimously by my colleagues here. They will have valuable clinical facilities — more better as far as the material for study is concerned. They all live in the hospital & work with university men. If necessary we might supplement this by special classes but it might be difficult to accomplish this & I would strongly urge that it should not be attached. The students in question have had a continuous work & I am sure they will have an amount of clinical & laboratory experience which under present conditions should entitle them to their degree. It would be a great satisfaction to these men to learn that

October oth, 1915

Professor Primrose,

No.4 Canadian General Hospital (University of Toronto).

My dear Professor Primrose:

I was greatly interested to get your letter yesterday. It gave us much information that we needed to have. It was so interesting that I read large extracts from it to the staff and students yesterday afternoon.

By this time it may be that you are in France, and I suppose that the activities will be increasing so rapidly at the front that before long you will have your hands full.

The Faculty of Medicine bids fair to have a large attendance this winter. The first year is about the same as it was last year. You may be aware that in accordance with instructions from the War Office students of the third and fourth years are coming back to finish their course. We have word of 18 who are on their way. This I think clears up the situation that you refer to in your letter. Doubtless the clinical work that these men got in France or England will be of service to them. I hope that they will all return, because this is not only the wish of the War Office but it would be very difficul for us otherwise to take action favourable to those who remain. They can get back again in the spring.

Evidently the War Office is expecting stirring times ahead because they will not allow Watson to come back to us. It will be difficult enough for us to have the work in Medicine

done this year, but the Dean told me yesterday that he thinks things are working out satisfactorily. In the other Faculties our attendance is greatly reduced, especially in Applied Science, but this is rather a good sign than otherwise.

It was a great pleasure to us to be able to go down to your Island and see Mrs. Primrose when we were in Muskoka. You have a delightful spot, and you must have often wished to look in upon them this summer. Mrs. Primrose kept very cheerful, but I am sure she often felt lonely enough with Mrs. Joy away and both you and Howard away. I have only seen her in the distance since we have come back. I have been a little under the weather myself, but I am not getting alright again.

With kind regards, I am,

Yours sincerely,

President.

cases, however, in which its use is justifiable are only those which are either aseptic or have a very small degree of infection—cases, in fact, comparable to those Sir Almroth Wright speaks of as capable of being closed by secondary suture. Even in these cases, however, we sometimes fail to secure success, and when employed we should carefully watch the results.

In my opinion the best dressing for septic wounds is a moist dressing, and we found the hypochlorous acid solution wonderfully effective. The moist dressing is applied directly to the wound, and over this dry gauze. Everything should be done to favour free evaporation from the surface and absorption into the dressing, which should be frequently changed. I am convinced it would be greatly to the advantage of the wounded if impermeable protective and oil-silk were entirely removed from the surgical armamentarium of the army. Their use in surgery is very restricted, and as they are employed in military surgery at present they do far more harm than good.

REFERENCE.

1 BRITISH MEDICAL JOURNAL, November 13th, 1915, p. 717.

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with the Author's compliments

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THE PHYSICS OF A SURGICAL DRESSING,

WITH SPECIAL REFERENCE TO THE HARMFUL EFFECT OF USING IMPERMEABLE MATERIAL OVER SEPTIC WOUNDS.

BY

LIEUT.-COLONEL A. PRIMROSE, M.B., C.M.EDIN., M.R.C.S.ENG.,

CANADIAN GENERAL HOSPITAL.

A NUMBER of most interesting papers by Sir Almroth Wright have recently appeared in the BRITISH MEDICAL JOURNAL, in which he demonstrates by a most complete series of ingenious laboratory experiments a method of securing the drainage of septic wounds received in war. He further gives an account of the practical value of these methods as employed in the treatment of men wounded in France during the present war. In his last communication, Part III of his lecture on "Wound infections and their treatment,"[1] he gives his scheme for the practical treatment of wound infections "from the first aid post back through the whole system of hospitals." In the field ambulance he applies a wet dressing of 5 per cent. solution of sodium chloride and 0.5 per cent. sodium citrate, and he states, "over the top of all ought to come a layer of *impervious protective tissue*" (the italics are mine). I wish to suggest that as a scheme for "drainage," the effectiveness of the dressing is entirely upset by the "impermeable protective." It should be noted, too, that in the same paragraph he definitely states that his object is "the procuring of drainage."

My attention was first called to the harmful use of impermeable material such as protective, oil-silk, rubber adhesive, etc., by a paper on the physics of a surgical dressing published about ten or fifteen years ago in the *Annales de l'Institut Pasteur*. Since reading it I have had many opportunities of observing clinically, in my hospital wards in Toronto, the deleterious effects of impermeable dressings.

The experiments, so far as I can recall them, were of the following character: An animal was prepared by shaving a portion of the skin surface and then an area

was excoriated sufficiently to draw blood. This area was covered with powdered strychnine and a piece of oil-silk was secured over it, so that evaporation from the surface was prevented. The animal died of strychnine poisoning. Another similar experiment was done, save that the oil-silk was replaced by an absorbent dressing, allowing of evaporation from the surface and absorption of secretions into the dressing. These animals showed no symptoms of poisoning. Similar experiments were done with some virulent bacteria, with similar results: under impermeable oil-silk septic absorption occurred, and under a simple absorbent dressing no sepsis resulted. There were, too, a series of laboratory experiments conducted to show the value of absorption into the dressings and the method of securing it by free evaporation from the surface. A flask was filled to half its capacity with water, and a wick of absorbent gauze saturated with water was placed so that one end of the wick lay in the water and the other projected beyond the mouth of the flask so as to form a tuft. A fragment of some aniline dye was placed in the gauze level with the neck of the flask, and very soon the gauze tuft projecting beyond the mouth of the flask was stained with the dye. A similar experiment was carried out with, however, the addition of a bell jar placed over the flask to prevent evaporation; the addition of the bell jar not only prevented the aniline dye from rising into the projecting tuft, but the dye actually descended to some extent towards the water in the flask. I would not vouch for the accuracy of detail, but I attempted to repeat one of these experiments in the laboratory tent in our hospital here. I took two small flasks, each about one-third filled with water; I saturated wicks of gauze in water, and immersing one end of the wick in the water in the flask, the other end was allowed to project as a tuft beyond the mouth of each flask. I inserted a fragment of crystal violet in the gauze at the level of the neck of the flask; I then tied a piece of oil-silk as a cap over the top of one of the flasks, allowing the gauze tuft to project within this protective cap. After some hours the dye had risen into the tuft of gauze projecting from the unprotected flask; on the other hand, in the flask covered by oil-silk the dye had failed to rise in the tuft, and had descended somewhat in the wick. This last flask was left overnight, and next morning the oil-silk was removed. Within an hour the dye mounted to the top of the tuft.

I have made many clinical observations as to the effect of impermeable dressings. I may cite one example: A woman was desperately ill with subphrenic abscess. I succeeded in establishing drainage, and her condition improved. Some ten days afterwards I was disappointed to find her temperature rising; the frequency of the pulse increased, and there was every evidence of a recrudescence of serious symptoms. I had not seen the dressing for a few days, and I found that the nurse had placed a large piece of oil-silk over my dressing in order to protect the bedclothes from getting soiled. I at once suspected the impermeable

covering as responsible for the trouble, and therefore continued to apply the same type of dressing, with, however, the omission of the oil-silk. The patient improved promptly, and all symptoms of absorption disappeared. The sister in charge of the case, on my explaining what had occurred, made a somewhat shrewd observation. The sister told me that she had observed, when a moist piece of alembroth gauze (charged with aniline dye) was applied under oil-silk to the unbroken skin, the dye stained the skin deeply so that it could not be removed by washing; on the other hand, moist alembroth gauze without oil-silk never produced staining. This, indeed, is a good demonstration of the effect of impermeable coverings over the dressing.

The hospital with which I am at present connected has only been in operation some six weeks, and hardly a day passes but patients are admitted with impermeable coverings over septic wounds. In one a septic thumb had been opened two days previously, and when the patient came to me a piece of oil-silk formed a cap over the entire thumb; outside that was some wool and a bandage. Another man had a septic wound of the leg dressed with moist gauze held in place by a patch of adhesive plaster, which overlapped the gauze in all directions. We have already seen dozens of similar cases in our short experience here of the employment of impermeable coverings over moist dressings. We have been able to note, too, the prompt improvement on the omission of that covering in our dressings; frost-bites with broken skin, shrapnel and bullet wounds—I am within the mark when I say that by far the majority of all septic wounds admitted have had an impermeable covering. The custom is unquestionably widespread.

What has tempted me most to write this note is the fact that so high an authority as Sir Almroth Wright advocates the use of impermeable protective over his dressing. This covering, I fancy, is added for some specific purpose, but its object is not stated, and there has been nothing of similar character used in his laboratory experiments. It is true it increases the penetrating power of an antiseptic, but Sir Almroth Wright's avowed object is drainage, and beyond all doubt it is infinitely better to depend upon drainage into the dressing than attempt to render a wound aseptic by confining the discharges and driving the antiseptic in.

Impermeable coverings used for the purpose of preventing evaporation are, indeed, sometimes useful. Thus, in a healing ulcer one finds the healing process will proceed well under a moist piece of lint entirely covered by protective; so, too, one uses it in skin grafting. Such dressings are removed easily, they do not stick, and the delicate epithelium is not disturbed on taking off the dressing. The impermeable covering is often a favourite dressing, too, for the very reason that "it does not stick," and particularly in children one is tempted to use it because the dressing can be changed without pain. The

Sanitary conditions in the Mediterranean camps.

They have been at Malta & Alexandria and now they are working in the Salonika army among the [illegible] troops. They are all three Sanitarians and graduates of Edinburgh University. They were sent to and camp [illegible] Bought on [illegible] [illegible] comfortable [illegible]. They are [illegible] with the [illegible] [illegible] in a [illegible] Hotel. [illegible] [illegible] a few years ago & read a paper at the academy [illegible] many have met him. Balfour is an entomologist who has spent a good many years in Egypt. He is a very interesting man and is most tired demonstrating his specimens. Specimens of mosquitoes, flies, lice etc are mounted in pill boxes and their [illegible] of form & colour shown up under a lens. We have constructed a large fly trap. I spent several [illegible] in design and it is quite interesting to stand [illegible] the wire cage and listen to the remarkable volume of sound produced by the buzzing of flies which have [illegible] allured to their destruction. It helps a [illegible] of an acquaintance from the mouth of flies in [illegible] and when we have several traps [illegible] distributed over our camps we hope to reduce flies to a minimum. Balfour in addition to being a scientist of first rank is a very jolly Scott & keeps us much amused by his observations on things in general.

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(UNIVERSITY OF TORONTO)

[illegible]

[illegible] 10th 1916

My dear Mr President,

[illegible] Canadian [illegible] especially and therefore I feel [illegible] I am unable to give you any special news [illegible] progress.

[illegible] and Engineer [illegible] of [illegible] fellows is most [illegible] good [illegible] camp. We have been so long together we [illegible] a large family indeed and a break [illegible] like this is all the more heavily felt. The last has left us low hearted in our attempt to find the [illegible] world [illegible] [illegible] to some [illegible] [illegible] from his horse and he [illegible] in a weight [illegible]. [illegible] [illegible] [illegible]

[illegible] tragedy was but closely averted as George [illegible] only, swam to the point of exhaustion [illegible], having lost the horses, he wandered about in a swamp [illegible] the [illegible] [illegible] conditions, but [illegible] finally found a path. The horses had "made off" and eventually arrived home [illegible] riderless. We were somewhat anxious about George because of his mental and physical condition when he arrived home but he is all right again. [illegible] such a nice boy and we were all very fond of him. He was moreover a most efficient officer and his [illegible] regret is a great loss to the unit in which he served so effectively as adjutant.

[illegible] hospital work at present is very light. We have had our turn in rest-mitting every third week, alternating with the other General Hospitals. When our turn comes we have a busy week often admitting [illegible] as a hundred patients daily.

[illegible] a good [illegible] - [illegible] only the [illegible] but a [illegible] number of [illegible] and [illegible] a few "gun-shot injuries". In fractures and in the locating of bullets we have splendid work done by Lieut. Mc Taggart. His negatives are wonderfully good: I have never seen better [illegible] and these results are obtained under very unfavourable conditions: it is difficult to do such work under canvas and it is not easy, in a remote place like this, to keep the complicated apparatus in working order. Mc Taggart is resourceful and most painstaking. The [illegible] results which are much appreciated by those of us who are so well assisted by his findings and which are greatly admired by our visiting surgeons physicians. We were all greatly delighted when Mc Taggart got his commission. It was long delayed! [illegible] and more [illegible], deserved promotion. We all gave him a really welcome in the officers mess.

At present we have 3 officers attached to our mess, constituting a "Sanitary Commission" Colonel Hunter: Col. Balfour & Col. Buchanan. Many are [illegible] to inspect & report upon

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on account of Mrs Chambers ill health I think he will accept & most of us have been advising him to do so. He has done faithful & good work here and we shall all miss him greatly in the unit. I thought Mrs Chambers looked very frail when I saw her in Shorncliffe and I understand she has been ill since then. Chambers would never progress humanly if anything happened to his wife & he stayed on here.

We are now speculating on the chances of having Col. Gordon back with us. We would give him a right hearty greeting should he turn up here. It is a curious fact that of the 4 Lt. Colonels on the purely clinical staff of our unit I am likely to be the only one left unless Gordon comes to the rescue!

We have been enjoying the most perfect weather here. Throughout the month of December and until the present we have enjoyed bright sunshine. An occasional day of rain & cold but very few. Today is perfect; we go about

during the day without an overcoat but at night it is always cold & often a few degrees of frost.

By the way I always intended to ask you if Howards name should not appear among the university undergraduates at the front! I notice his name is not included in the list published in the Varsity war supplement of July 1915. He completed his first year in arts and began his second year in October 1914 but he dropped out to join the machine gun section of the Engineers now very soon after the session began. He therefore did not complete his year nor did he pay any fees. He is still an undergraduate of Varsity College and will continue his course when he returns. He is at present a lieutenant in the Chief Ordnance Corps of Bramshott Camp in England. His history is that at first he went to the Exhibition camp as private in the machine gun section but was turned down because of his heart. He then took a commission and came to England as lieutenant in the 36th Battalion. He had a slight breakdown in England and was compelled to give up infantry and he is now in the ordnance department at Bramshott. Would you kindly have someone look into the matter and see as I would like to see his name among the Varsity boys.

I hope you are now enjoying good health. I was very sorry to learn that you were not well at the beginning of the session. I hope too the boys are getting strong again.

I forgot to mention the fact that we are giving the Varsity boys here regular instruction in the wards & laboratories. We have a complete time table arranged, copy of which Roberts sent to the Dean. Daily instruction is provided for. All the teachers are on the University staff and we have provided for all the subjects demanded in the curriculum. There is a superabundance of clinical material & splendid opportunities for laboratory work also.

We are all well & in excellent spirits. We are all convinced that there is no better field for the work of such hospitals than exists here.

Please remember me very kindly to Mrs Falconer with best wishes. Yours very sincerely

A. Primrose

We have passed a very comfortable winter under canvas but, now that hot weather is approaching, we would find the summer very trying in bell tents. The sun is already very hot during the day and the heat in an ordinary bell tent is quite unbearable. Fortunately in the late afternoon the heat moderates and when the sun goes down it gets quite cool. It is often chilly at night and one always sleeps with comfort between blankets. We are all erecting frames covered with mosquito nets over our beds. This is the greatest possible comfort, keeping off both mosquitoes & flies.

In the day time we wear helmets or wide brimmed, western cowboy felt hats. The latter are issued to the British forces here and we obtain them from ordnance. You would be quite amused if you saw the numbers of young university chaps, going about with cowboy hats, with great variety in the shape of the crown, arranged according to the peculiar artistic taste of the owner. The young blades usually button up the left side of the brim and thus contribute much to the "smartness" of the appearance although at the expense of efficiency as a sun shade. When the sun gets very hot the brim is sometimes dropped and so the officers in cowboy hats and shirt sleeves look more like a crowd of agriculturists than members of a university hospital staff.

Rudolf has moreover reached home safe this. The week time from Liverpool the day before he sailed. I am glad he has returned to Toronto particularly for his wife's sake; she has indeed had a miserable winter. I have just been getting news too of my wife's illness. Fortunately the message is very reassuring and I feel confident she will be all right by the time. Dr. Clarke of Bobby Beck very kindly wrote & told me promptly all about it. I felt very happy to know she was in his hands as I have every confidence in him. I can hardly credit the

fact that I have attained to the dignity of a grandfather! I got the news by cable a month ago and now I have very vivid new pictures of the wee bairns from Alice Ingress. I am quite proud of having a nameseake in the family circle!

I am sending you, under separate cover, copy of a paper I published recently in the British Medical Journal on Surgical Dressings. I succeeded in stimulating a lot of correspondence as no less than 9 letters appeared in criticism. I must say, whatever the merit of the original paper, the only critics were not very enlightening, although most of them agreed with me. I am writing another article on Direct Transfusion of Blood which I hope to send off for publication soon. I presented the subject at our Salonika Medical Society a short time ago.

I trust your boys are now strong and that you will all enjoy good summer holidays. Please remember me most kindly to Mrs Falconer.

Very sincerely yours.

A. Primrose

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He greatly enjoyed Mr Ellis' volume of "Wayside weeds" which I gave him to read. Buchanan is also a nice fellow. He is a member of the London Health Board in peace time. The commission wanders all over the Salonika District in a motor car and reports on things sanitary and insists upon reforms where that may be necessary.

We expect to get orders any day to move to our new site where we shall have very substantial and comfortable huts. These huts are all now I have just been completed by the contractors. They present quite an imposing appearance with their red tiled roofs. The average dimensions of each hut would be about 100 feet long & 20 feet wide and, as there are over 100 of these, they constitute a small village, capable of accommodating about 1500 souls.